

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listings of Claims:

1. (currently amended) A semiconductor die package comprising:
a semiconductor die;
a leadframe having a ~~chemically-etched~~ surface roughened by chemical-etching, an organo-metallic coating being formed on said chemically-etched surface; and
a capsule comprising a molding compound, said capsule enclosing at least a portion of said die and at least a portion of said leadframe, said molding compound being in contact with said organo-metallic coating on said chemically-etched surface ~~of said leadframe~~ so as to reduce the possibility of separation between said molding compound and said leadframe as said package undergoes thermal cycles and/or to inhibit the ingress of moisture into said package.
2. (original) The semiconductor package of Claim 1 wherein said leadframe consists essentially of copper alloy.
- 3-6. (canceled)
7. (previously presented) A semiconductor package comprising:
a semiconductor die;
a leadframe having a chemically-etched surface; and
a capsule enclosing at least a portion of said die and at least a portion of said leadframe;
said package further comprising an organo-metallic coating on the surface of the leadframe.
- 8-20. (canceled)

21. (previously presented) The semiconductor package of Claim 1 wherein the arithmetic mean deviation of a profile of said chemically-etched surface is in the range of 0.050 μm to 0.170 μm .

22. (previously presented) The semiconductor package of Claim 21 wherein the mean peak-to-valley height of said chemically-etched surface is in the range of 0.180 μm to 0.700 μm .

23. (previously presented) The semiconductor package of Claim 22 wherein the ten-point height of irregularities of said chemically-etched surface is in the range of 0.400 μm to 1.500 μm .

24. (previously presented) The semiconductor package of Claim 21 wherein the ten-point height of irregularities of said chemically-etched surface is in the range of 0.400 μm to 1.500 μm .

25. (previously presented) The semiconductor package of Claim 24 wherein the maximum profile valley depth of said chemically-etched surface is in the range of 0.200 μm to 0.750 μm .

26. (previously presented) The semiconductor package of Claim 22 wherein the maximum profile valley depth of said chemically-etched surface is in the range of 0.200 μm to 0.750 μm .

27. (previously presented) The semiconductor package of Claim 21 wherein the maximum profile valley depth of said chemically-etched surface is in the range of 0.200 μm to 0.750 μm .

28. (previously presented) The semiconductor package of Claim 1 wherein the mean peak-to-valley height of said chemically-etched surface is in the range of 0.180 μm to 0.700 μm .

29. (previously presented) The semiconductor package of Claim 28 wherein the ten-point height of irregularities of said chemically-etched surface is in the range of 0.400 μm to 1.500 μm .

30. (previously presented) The semiconductor package of Claim 29 wherein the maximum profile valley depth of said chemically-etched surface is in the range of 0.200 μm to 0.750 μm .

31. (previously presented) The semiconductor package of Claim 28 wherein the maximum profile valley depth of said chemically-etched surface is in the range of 0.200 μm to 0.750 μm .

32. (previously presented) The semiconductor package of Claim 1 wherein the ten-point height of irregularities of said chemically-etched surface is in the range of 0.400 μm to 1.500 μm .

33. (previously presented) The semiconductor package of Claim 32 wherein the maximum profile valley depth of said chemically-etched surface is in the range of 0.200 μm to 0.750 μm .

34. (previously presented) The semiconductor package of Claim 1 wherein the maximum profile valley depth of said chemically-etched surface is in the range of 0.200 μm to 0.750 μm .

35. (canceled)

36. (previously presented) The semiconductor package of Claim 7 wherein the capsule is in contact with the organo-metallic coating so as to reduce the possibility of separation between said capsule and said leadframe as said package undergoes thermal cycles and/or to inhibit the ingress of moisture into said package.

37. (previously presented) The semiconductor package of Claim 1 wherein a recess is formed in the leadframe, a surface of the leadframe within the recess being chemically-etched.

38. (previously presented) The semiconductor package of Claim 1 comprising a plated metal layer on a portion of the leadframe.

39. (previously presented) The semiconductor package of Claim 38 wherein a surface of the leadframe under the plated metal layer is chemically-etched.

40. (previously presented) The semiconductor package of Claim 38 wherein a surface of the leadframe under the plated metal layer is not chemically-etched.

41. (previously presented) The semiconductor package of Claim 1 wherein a top surface or a side surface of said leadframe is chemically-etched and a bottom surface of said leadframe is not chemically-etched.

42. (previously presented) The semiconductor package of Claim 1 wherein said chemically-etched surface is light brown to brown in color.

43. (previously presented) The semiconductor package of Claim 7 wherein the arithmetic mean deviation of a profile of said chemically-etched surface is in the range of 0.050 μm to 0.170 μm .

44. (previously presented) The semiconductor package of Claim 7 wherein the mean peak-to-valley height of said chemically-etched surface is in the range of 0.180 μm to 0.700 μm .

45. (previously presented) The semiconductor package of Claim 7 wherein the ten-point height of irregularities of said chemically-etched surface is in the range of 0.400 μm to 1.500 μm .

46. (previously presented) The semiconductor package of Claim 7 wherein the maximum profile valley depth of said chemically-etched surface is in the range of 0.200 μm to 0.750 μm .

47. (previously presented) The semiconductor package of Claim 23 wherein the maximum profile valley depth of said chemically-etched surface is in the range of 0.200 μm to 0.750 μm .

48. (new) The semiconductor package of Claim 1 wherein the roughened surface of the leadframe and the organo-metallic coating together reduce the possibility of separation between said molding compound and said leadframe as said package undergoes thermal cycles and/or inhibit the ingress of moisture into said package.